METHOD FOR FAULT DIAGNOSIS OF A TURBINE ENGINE

ABSTRACT OF THE DISCLOSURE

A method of diagnosing a turbine engine includes the steps of acquiring engine operating parameters; calculating corresponding engine residual values; computing the mean and the standard deviation of each engine residual value; normalizing dynamically each engine residual value to yield normalized engine

5   residuals; mapping, via a cluster technique mapping, the normalized engine residuals as input vectors into an engine condition space having clusters representing either normal vector engine conditions or faulty vector engine conditions; and identifying a closest cluster within the engine condition space to determine whether the engine under analysis is normal or faulty. A belief factor

10   may be obtained as a function of the distances between the input vectors and specific clusters.